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PATENT APPLICATION  
Mo-4861  
HE-146

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICATION OF	)	
BERND WILLING	)	GROUP NO.: 3651
SERIAL NUMBER: 09/195,005	)	
FILED: NOVEMBER 18, 1998	)	EXAMINER: J.E. VALENZA
TITLE: DEVICE FOR INSERTING AND REMOVING WORK STATIONS CIRCULATING ON A CHAIN	)	

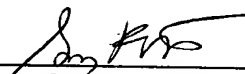
**LETTER**

Mail Stop - Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 2231-1450


Sir:

Enclosed herewith are three copies of an Appeal Brief in the matter of the subject Appeal. Please charge the fee for filing the Brief, \$330.00, to our Deposit Account Number 13-3848 .

Respectfully submitted

By   
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Name of applicant, assignee or Registered Representative  
  
Signature  
April 28, 2004  
Date



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**APPEAL BRIEF**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal mailed on February 27, 2004. The Notice of Appeal appeals the rejection of Claims 7, 11 and 12 in the Final Office Action dated October 29, 2003.

The headings used hereinafter and the subject matter set forth under each heading are in accordance with 37 CFR 1.192(c).

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Alexandria VA 22313-1450

Date

Gary F. Matz, Reg. No. 45,504

Name of applicant, assignee or Registered Representative

Signature

April 28, 2004

Date

## **I. REAL PARTY IN INTEREST**

The named inventor has assigned his interest in this application to Hennecke GmbH. Hennecke GmbH is therefore the real party in interest in this appeal.

## **II. RELATED APPEALS AND INTERFERENCES**

The Appellant is unaware of other appeals or of any interference that would directly affect or be directly affected by, or have bearing on, the present appeal.

## **III. STATUS OF CLAIMS**

Claims 7, 11 and 12 are rejected under 35 U.S.C. § 112, first paragraph as being based on an inadequate disclosure because they contain elements deemed to be inadequately disclosed in the specification.

## **IV. STATUS OF AMENDMENTS**

In Appellant's Amendment dated January 9, 2004 in response to Final Office Action dated October 29, 2003, Claims 8 and 10 were cancelled and the limitations thereof incorporated into Claim 7. In the Advisory Action dated February 20, 2004, the Examiner indicated that the amendments were entered. Thus Claims 7, 11 and 12 are pending in the application.

## **V. SUMMARY OF THE INVENTION**

The claims on appeal are directed toward a device for conveying work station wagons through a plurality of working steps. The device includes an oval track around which the work station wagons travel, an insertion guide track, and a removal guide track. The oval track includes a first guide strip forming a continuous first oval, a second guide strip spaced apart from the first guide strip and forming a second, larger oval, thereby forming a guide channel between the two guide strips, a drive chain that includes carrier cages, travelling inside the guide channel, and the second guide strip having at least two gaps in its circumference. The insertion guide track is located outside the second guide strip, with a portion of the insertion guide track being parallel to a portion of the second guide strip and having a load dependant drive in which the maximum speed is higher than the chain speed. The removal

guide track includes coupling elements selected from switchable electromagnets, rocker heels, and switchable points tongues, and is located outside the second guide strip, with a portion of the removal guide track being parallel to a portion of the second guide strip. Each of the work station wagons have i) at least one first guide roller mounted on a vertically projecting mounting provided on one side of the work station, which is removably connected to the drive chain, ii) at least one second guide roller provided on the side of the work station wagon opposite from the first guide roller, the second guide roller connecting the work station wagon to the removal guide track, and iii) a spacer that A) defines the minimum distance between the work station wagons when the work station wagons are engaged with the drive chain and B) contacts the preceding work station wagon engaged with the drive chain.

The device operating by moving the work station wagons along the insertion guide track by a load-dependant friction drive to a location where first guide roller pass through one of the gaps, the first guide roller is disengaged from the carrier cage on the drive chain and the workstation wagons are connected via said second guide roller to a coupling element on said removal guide track.

#### **VI. ISSUES PRESENTED**

The following issue is presented in this Appeal:

- a) Whether Claims 7, 11 and 12 are based on an inadequate disclosure.

#### **VII. GROUPING OF CLAIMS**

Claims 7, 11, and 12 stand or fall together.

#### **VIII. ARGUMENT**

Each issue presented for review is addressed hereinafter under the appropriate heading:

**Whether Claims 7, 11, and 12 are based on an inadequate disclosure.**

The Examiner has rejected Claims 7, 11, and 12 under 35 U.S.C. § 112, first paragraph alleging that the terms “first guide roller” and “second guide roller” are inadequately disclosed. The Examiner cites the last five lines on page 5 of the September 25, 2002 decision of the Board of Patent Appeals in the present application for the proposition that using “first guide roller” in place of “detachable connection element” and “second guide roller” in place of “connecting element” does not overcome the inadequate disclosure issue. The cited portion of the decision reads as follows:

Further in this regard, the specification fails to describe how the wagons are removably connected to and disconnected from the circulating chain. Nor does it describe a mechanism for moving the wagons along the removal guide track or along the insertion drive track, which would appear to be necessary for the operation of the claimed system, or how the wagons are removably connected to these tracks.

Each of the questions embedded in the language cited from the decision of the Board of Patent Appeals is addressed below.

**i) How are the wagons removably connected to and disconnected from the circulating chain?**

The circulating chain drive includes a guide channel, which is formed by the two guide strips, wherein the drive chain runs inside the guide channel. The chain has carrier cages functioning as a connection element part on the chain side to receive connection elements from the wagon. The carrier cages are arranged at a regular spacing. Guide rollers, which run in the channel as long as the wagon is guided on the chain are provided laterally on the work station wagons and are removably fastened to the carrier cages (see page 5, lines 8-17 and Fig. 2 of the specification). In other words, the guide rollers on the wagons are held in place by the carrier cages on the circulating chain when the wagons are connected to the chain.

The removal guide track also consists of a channel, which is formed by guide strips. On the side facing away from the chain drive the work station wagons have guide rollers, which in the event of transfer are engaged by switchable points

tongues and are guided into the guide channel of the removal guide track. On the side opposite the points, the guide strip includes a break or interruption so that the guide rollers belonging to the wagon to be removed, are moved out of the guide channel and out of the carrier cages (see page 5, lines 18-26 and Fig. 2 of the specification). In other words, at break points in the guide tracks, the switchable points tongues (or switchable electromagnets or rocker heels) redirect guide rollers on the opposite side from the wagon from the inner circulating chain to the removal guide track and the guide rollers on the other side release from the carrier cages.

Thus the action of the guide rollers and carrier cages in removably connecting and disconnecting wagons from the circulating chain is fully disclosed, described and supported in the specification.

**iii) What is the mechanism for moving the wagons along the insertion drive track.**

The insertion guide track has a load-dependent drive (see page 4, lines 24-25 of the specification) that moves the chain in the guide channel between the two guide strips.

**ii) What is the mechanism for moving the wagons along the removal guide track?**

The removal guide track is the other side of the oval from the insertion guide track (see Fig. 1), so it also takes advantage of the load-dependent drive.

**iv) What is the operation of the claimed system?**

The system operates by moving the work station wagons along the insertion guide track by a load-dependant friction drive to a location where a first guide roller passes through one of the gaps, the first guide roller is disengaged from the carrier cage on the drive chain and the workstation wagons are connected via the second guide roller to a coupling element on the removal guide track.

**v) How are the wagons removably connected to the tracks?**

As discussed relative to i) above, the action of the guide rollers, carrier cages and switchable points tongues (or switchable electromagnets or rocker heels) effect the removable connection of the wagons between the tracks.

The Examiner has also alleged, that in Claim 7, the terms "first guide roller" and "second guide roller" are inadequately disclosed and that the claims are incomplete because the coupling and detaching functions are recited but the means for accomplishing them are not.

Appellant asserts that the terms "guide rollers" and "carrier cages" are terms that are readily recognizable and understandable to those skilled in the art. Appellant submitted copies of catalog pages from a Bickle, Räder + Rollen catalog, which show commercially available guide rollers that can be used in the invention and pages from a Ketten Wulf catalog, which show commercially available carrier cages that can be used in the invention with the Amendment dated January 9, 2004 to support their position.

The Bickle, Räder + Rollen catalog has been published since 1996. The particular guide rollers shown are particularly well suited for the claimed device and are made of polyamide and include a ball-bearing.

The Ketten Wulf catalog has been published since 1985. A chain is shown on page 282, which is equipped with rectangular projecting carrier bolts wherein carrier cages are formed between every two carrier bolts.

As the Board stated in its September 25, 2002 Decision:

The test regarding enablement is whether the disclosure, as filed, is sufficiently complete to enable one skilled in the art to make and use the claimed invention without undue experimentation. The experimentation required, in addition to not being undue, must not require ingenuity beyond that expected of one of ordinary skill in the art. Moreover, the specification must teach those of skill in the art how to make and use the invention as broadly as it is claimed.

Courts have defined that "a person of ordinary skill in the art is deemed to be aware of all relevant prior art." *Helifix, Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1347 (Fed. Cir. 2000). Thus a skilled artisan would have understood what "guide rollers" and "carrier cages" were because of their widespread availability in commercially

available catalogs. Appellant has used the terms "guide rollers" and "carrier cages" because a skilled artisan would have known what they were and how to use them in the invention as described.

The Examiner has also suggested that the claimed device will not work without "wagon crushing." The disclosure at page 4, lines 16-30 and page 6, lines 1-10 in connection with figures 1, 2, and 4 indicates that in the region of deflection (40) of the chain, the work station wagons are wider apart as shown for example in figure 2 for wagon IV. Because the insertion guide track has a load dependant friction drive in which the maximum speed is higher than the chain speed, the wagon to be inserted is accelerated to a higher speed than the following wagon which is traveling in the region of the deflection chain.

Thus, the wagon to be inserted moves into the gap between the following wagon and the preceding wagon. In the region in front of the switchable points tongues (in other words the region in front of transfer point 31) the wagon to be inserted loses contact with the driving wheels of the friction drive and is no longer driven by the friction drive. Thus, the velocity of the wagon to be inserted decreases in the region in front of the transfer point 31.

Figures 1, 2, and 4 show that the driving wheel which is located next to the transfer point 31 at the insertion guide track is located at a distance from the switchable points tongues which exceeds one wagon length. Thus, the wagon to be inserted is no longer driven by the friction drive for a distance that exceeds one wagon length. The wheels of the friction drive are not indicated by reference numerals in Figures 1, 2, and 4. In figure 1, for example, the wheels of the friction drives are illustrated in the form of circles and are located under the insertion guide track.

After the wagon to be inserted has been transported into the gap between the following and the preceding wagon by the friction drive and after the velocity of the wagon to be inserted has been reduced by the loss of contact with the driving wheels of the friction drive, the speed of the wagon to be inserted decreases and becomes slower than the speed of the following wagon. Thus, the following wagon pushes the wagon to be inserted via its spacer into the position in which the connection of the wagon to be inserted to the chain takes place.



The Examiner has further suggested that there is no disclosure of any control system to prevent wagon crushing on insertion. As described above, the insertion control mechanism is inherent in the design of the present device as shown in Figures 1, 2, and 4.

Drawings alone can be sufficient to provide the "written description of the invention" required by 35 U.S.C. § 112, first paragraph. Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1564 (Fed. Cir. 1991).

Appellant has met the standard of 35 U.S.C. § 112, first paragraph by first providing examples of "carrier cages" and "guide rollers" and providing sufficient description to enable a skilled artisan to avail himself to what is conventional or well known to one of ordinary skill in the art to reproduce the invention.

The Examiner has not presented any evidence, let alone a preponderance of evidence, demonstrating why a person skilled in the art would not recognize in Appellant's disclosure a description of the invention defined by the claims, and in particular the terms "carrier cages" and "guide rollers."

Therefore, the rejection of Claims 7, 11 and 12 under 35 U.S.C. § 112, first paragraph is improper and should be withdrawn.

## **IX. SUMMARY**

In rejecting a claim, the Examiner must set forth express findings of fact regarding his analysis which support a lack of written description conclusion. These findings should:

- (A) Identify the claim limitation at issue; and
- (B) Establish a *prima facie* case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. MPEP § 2163

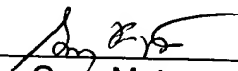
The Examiner has not presented any evidence to support his *prima facie* case regarding the terms "carrier cages" and "guide rollers" and, therefore, has not met his burden of presenting, by a preponderance of evidence, why a person skilled

in the art would not recognize what is meant by those terms. Appellant has presented sufficient factual evidence to show that a skilled artisan would be able to understand the claimed invention. Therefore, the holding that the written description requirement of 35 U.S.C. § 112, first paragraph has not been complied with is not correct because the subject terms and the workings and operation of the claimed device are described in sufficient detail that one skilled in the art can reasonably understand the terms of the claim and conclude that the inventors had possession of the claimed invention at the time the application was filed.

#### **X. CONCLUSION**

The claims define a unique device for conveying work station wagons through a plurality of working steps. The Examiner has misinterpreted the specification and its relationship with the claims. In order to establish a prima facie case, the Examiner must show that the invention was not described in sufficient detail that one skilled in the art could reasonably understand the terms of the claims and conclude that the inventors had possession of the claimed invention at the time the application was filed. The preponderance of evidence clearly establishes the allowability of Claims 7, 11, and 12. Reversal of all of the Examiner's rejections and allowance of these claims are respectfully requested.

Respectfully submitted,

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## **APPENDIX - CLAIMS ON APPEAL**

Claim 7. A device for conveying work station wagons through a plurality of working steps comprising:

- a) an oval track around which said work station wagons travel, said oval track comprising i) a first guide strip forming a continuous first oval, ii) a second guide strip spaced apart from said first guide strip and forming a second, larger oval, thereby forming a guide channel which is formed between said two guide strips, iii) a drive chain, comprising carrier cages, travelling inside said guide channel, and iv) said second guide strip having at least two gaps in its circumference,
- b) an insertion guide track located outside said second guide strip, with a portion of said insertion guide track being parallel to a portion of said second guide strip, and having a load-dependent drive in which the maximum speed is higher than the chain speed,
- c) a removal guide track, comprising coupling elements selected from the group consisting of switchable electromagnets, rocker heels, and switchable points tongues, located outside said second guide strip, with a portion of said removal guide track being parallel to a portion of said second guide strip,
- d) each of said work station wagons having i) at least one first guide roller mounted on a vertically projecting mounting provided on one side of said work station wagon, said first guide roller being removably connected to said drive chain and ii) at least one second guide roller provided on the side of said work station wagon opposite from said first guide roller, said second guide roller connecting said work station wagon to said removal guide track, and iii) a spacer that A) defines the minimum distance between said work station wagons when said work station wagons are engaged with said drive chain and B) contacts the preceding work station wagon engaged with said drive chain,

with said device operating as follows:

- 1) said work station wagons are moved along said insertion guide track by a load-dependant friction drive to a location where said first guide roller pass through one of said gaps and engage a carrier cage on said drive chain,
- 2) said work station wagons are conveyed along said oval track, and
- 3) once said work station wagons reach another one of said gaps, said first guide roller is disengaged from the carrier cage on said drive chain and said workstation wagons are connected via said second guide roller to a coupling element on said removal guide track.

Claim 11. The device of Claim 7, wherein the insertion guide track has a friction drive, which engages on the outer surface of the wagon.

Claim 12. The device of Claim 11, wherein a wagon to be inserted has a higher speed than a following wagon on the chain, so that during a transfer, the wagon to be inserted is pushed into the transfer position by the spacer of the following wagon.